

Sustainable Urban Drainage Systems (SUDS)

COURSE OVERVIEW

This practical course introduces the core principles, design approaches, and practical implementation of Sustainable Urban Drainage Systems (SUDS), also known as Green Stormwater Infrastructure or Low-Impact Development. The curriculum covers the planning, design, and maintenance of SUDS features that reduce runoff, improve water quality, support biodiversity, and strengthen urban resilience. It addresses the limitations of conventional drainage by focusing on source-control solutions that mimic natural hydrology. Through various practical exercises, participants will be able to design, assess, and integrate SUDS into urban projects, enabling them to meet regulatory requirements and advance sustainable, climate-resilient water management.

WHO SHOULD ATTEND?

This course is ideal for civil and environmental engineers, urban planners, landscape architects, and public works professionals involved in water resources management, urban development, and environmental compliance, who are responsible for designing, approving, or managing stormwater infrastructure to mitigate flooding, improve water quality, and enhance urban sustainability.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Evaluate the hydrological and water quality limitations of conventional drainage systems.
- Apply the core principles of SUDS (e.g., treatment train, multi-functionality) to urban planning and design.
- Design and size key SUDS components such as green roofs, permeable pavements, bioretention cells (rain gardens), and swales.
- Analyze the long-term performance, maintenance requirements, and lifecycle costs of SUDS.
- Integrate SUDS into regulatory frameworks and develop effective stormwater management plans.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- The fundamental principles and components of Sustainable Urban Drainage Systems (SUDS).
- Hydrological analysis techniques for green stormwater infrastructure design.
- Design methodologies for key SUDS components including green roofs and permeable pavements.
- Water quality treatment processes in bioretention systems and constructed wetlands.
- Integration strategies for SUDS within urban planning and development frameworks.
- Maintenance requirements and lifecycle management of sustainable drainage assets.
- Performance monitoring and evaluation methods for SUDS implementation.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded